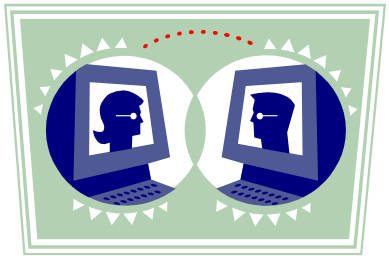

Videoconferencing is a technology whose time has come. The faltering economy, the events of September 11, 2001, the ever greater hassle of air travel combined with the increasing quality and decreasing cost of videoconferencing have set the stage for rapid expansion of videoconferencing technology.

AT&T introduced the Picturephone at the 1964 New York World's Fair and offered it commercially by 1970, but there were few takers. In 1986 PictureTel was selling an $80,000 videoconferencing system that required $100 per hour phone lines. CU-SeeMe offered internet-based video for MacIntosh in 1992 without sound, and by1995 video for Windows with sound. In 1998 PolyCom first offered high-quality ISDN based videoconferencing units for $13,000, compared to $60,000 for systems of comparable quality, at least some of which had been installed by the major national law firms. Today, at the low end, anyone with a desktop computer and a video card can install a $69.95 "videocam," and use WebEx (http://www.webex.com) or other on-line conferencing networks to conduct a "video conference," albeit with a tiny picture of inconsistent quality and jerky motion.

There are three principal videoconferencing methods available. There are the ISDN systems, which offer very high quality, consistent, videoconferencing. There are the IP (internet protocol) based systems which, when run over a dedicated T-1 (high bandwidth) line, can also provide high quality consistent videoconferencing, but require a dedicated, hard-wired wide area network. The IP based systems, when run over the internet produce video of a lower and inconsistent quality. Finally there are the POTS (plain old telephone service) systems that are the descendants of AT&T's Picturephone, which run over a standard analog telephone line. Each of these systems has its drawbacks and its good points.

To run at their highest quality the ISDN systems require three ISDN telephone lines for each unit. ISDN phone lines are usually billed at per minute rate, and can be quite expensive, although it may be possible to negotiate from the telephone company a flat rate for a certain number of hours each month. ISDN is widely available in Maine. However, these systems still require an individual to be at a location that has the equipment installed. Although the video quality is somewhat reduced, it is possible to do multi-point conferencing with up to four locations using each ISDN line separately. The PolyCom and PictureTel systems used in Maine can utilize both the ISDN connections and the IP connections discussed below.

All of the people interviewed for this article who use the ISDN systems with large 32" or 34" monitors report high levels of acceptance and satisfaction with the equipment, and with videoconferencing in general. The quality of the connection makes it very much like an in-person conference or meeting. Although there is no single "telephone directory" for videoconferencing sites, there is a very extensive national network of ISDN based sites.

The IP based systems can produce high-quality videoconferencing when run over a dedicated high-bandwidth wide area network (WAN). The cost of installing such a network would probably prohibit most Maine law firms from utilizing such a system unless there was already an existing WAN installed between offices. Even then, the videoconferencing would tend to grab all of the bandwidth when in use, and diminish the availability of the network for other uses such as telephone and computer networks. It might be possible to do internet-based videoconferencing over DSL (another high-bandwith protocol) internet connections. However DSL is available in few locations in Maine. Even where DSL is available, its speed, and consequently the quality and consistency of the video can change because the bandwidth is shared, and the internet itself is subject to slowdowns. Desktop computer based IP videoconferencing systems provide a small picture and often jerky movement.

POTS systems, for professional use, might be adequate for casual client contact, but would not be acceptable for depositions, hearings, meetings or conferences. These systems are relatively inexpensive, but most of them run only over analog telephone lines, as opposed to the digital phone lines in most law offices. They would require the installation of a dedicated analog phone line. That's an expense, but it still doesn't compare with the const of installing and maintaining three ISDN lines.

Although major national law firms have been using videoconferencing in some fashion for about five years, there has been little use in by law firms in Maine. At least one of the State's major firms is now in the process of "product identification," and is likely to install videoconferencing within the next year.

The United States Attorney has had videoconferencing installed for a couple of years in its Bangor and Portland offices. They use it regularly for attorney and staff meetings between the two offices, as well as ad hoc meetings on specific issues. The system is used as well for in-service CLE training and conferences with other U.S. Attorney offices around the country. They have used the equipment for a multipoint four-site conference

with the four New England offices participating at the same time. The U.S. Attorney system consists of PictureTel videoconferencing hardware with a 34" Sony Trinton monitor. Mark Terison, of the U.S. Attorney's office, indicates that he is unaware of any financial analysis of saved time and travel expense versus the cost of equipment and phone charges. He does

The Federal Court's first experience with videoconferencing was using the equipment in the U.S. Attorney's office. In a trial before Magistrate Cohen, a witness in Washington, D.C. testified via live videoconference. Since that time the Court has installed it's own equipment in Bangor and Portland. Each courtroom is equipped for videoconferencing, as is the jury room in Portland, which the court uses for staff meetings and training with the Bangor location.

The equipment has seen limited use for trials and hearings, but it is anticipated that as the bar becomes more familiar with the equipment and its availability, there will be more widespread use. It has been used by Judge Hornby to conduct a deposition in lieu of trial testimony of an expert witness, and to conduct a pre-sentencing conference with the Probation Officer in Bangor and the defendant and counsel in Portland. Judge Singal has conducted a criminal competency hearing with an out-of-state expert testifying as to his examination and evaluation of the defendant. Magistrate Kravchuck has a remote hearing scheduled, which should be conducted by the time of this publication.

Through grants from the Department of Commerce and the Legal Services Corporation, Pine Tree Legal Assistance has installed videoconferencing equipment in each of its seven offices (Portland, Lewiston, Augusta, Bangor, Presque Isle, Machias and Rockland), and in several court and family violence shelter locations. The Pine Tree equipment is PolyCom rather than PictureTel, although PolyCom has recently acquired PictureTel, and newer systems are all being marketed under the PolyCom name.

The court and shelter locations are part of the Commerce Department TOP grant, and will afford the possibility of remote hearings on requests for temporary protection from abuse orders, without requiring the physical presence of the petitioner at the courthouse. The shelter equipment will also be used to provide access for domestic violence victims to Pine Tree's DV attorneys in its various offices. Another of the units is to be installed in the Maine Judicial Center in Augusta.

Pine Tree's equipment has been installed by Maine TeleMedicine, which already has an installed network of more than 100 locations around the State, including most rural health centers in the most remote locations. It is hoped that this network and the expanding availability of other videoconferencing sites will provide access to Pine Tree attorneys for low-income clients around the state.

Pine Tree's staff, generally as resistant to change and technological innovation as any other law firm, immediately accepted and was anxious to use the videoconferencing technology. Pine Tree has used the equipment to conduct new staff orientation, regular management meetings, regular meetings of its family law practice group and many other

ad hoc meetings and conferences. Mark Terison and Margaret Groban of the U.S. Attorney's office have helped conduct remote training for Pine Tree staff in federal domestic violence law, saving many hours of travel time and expense.

Concerned about paying for the ongoing cost of the ISDN phone lines after the grants that are currently supporting those expenses expire, Pine Tree plans to rent its facilities and equipment to community groups and the private bar in the hope of supporting its ongoing costs. Attorneys interested in using the Pine Tree equipment in one of its seven offices should contact Executive Director Nan Heald in Portland.

Headlight Video, in Portland currently rents out two public conference rooms, one with a PolyCom 970 videoconferencing unit and a 50" plasma monitor, the other with a PolyCom 512 and a standard 34"monitor much like the units in the Federal Court, U.S. Attorney and Pine Tree locations.

Susan Mexcur at Headlight reports increasing use by the legal profession for out-of-state depositions of expert witnesses and employment interviews. Recently the Headlight facility has been used to allow a Portland expert witness to testify at a trial in Hawaii. Use of the Headlight system costs roughly $325 per hour, plus a communication charge for the phone lines. Comparing the cost of a half day deposition in Philadelphia (having to pay for the facility on the other end, as well) with the cost of air fare, taxi, hotel, meal and lost productive time to do a deposition in person makes videoconferencing depositions highly attractive, even if it involves travel from Bangor to Portland.